

Quiz 2 CISC 105

06/20/2005

Name: _____

A. (10 points) Say what x equals in the following code segments. Assume x and y are declared integers.

1.
x = 3 < 4;

2.
x = 2 < 2 && 3

3.
x = 3;
y = 2 * x;
x = y == y;

4.
x = 3 < 4 > 0;

5.
y = 0 >= 1;
x = !y;

B. (4 points) What is the output of the following code, assuming that a has the value 10 and b has the value 20.

```
if (a >= 10 && a <= 20 && b >= 15 && b <= 25) {  
    printf ("Both are in range\n");  
}  
else if (a >= 10 && a <= 20) {  
    printf ("a is in range\n");  
}  
else if (b >= 15 && b <= 25) {  
    printf ("b is in range.\n");  
}  
else {  
    printf ("Neither is in range\n");  
}
```

What if a has the value 20 and b has the value 10?

C. (16 points) Fill in the values to the truth table.

A	B	A B	! (A B)	!A !B	!A && !B
T	T				
T	F				
F	T				
F	F				

D. (5 points) What is the output for the following code?

```
#define COUNTDOWN 5
int main() {
    int count;
    for( count = COUNTDOWN; count > 0; count-- ) {
        printf("%d\n", count);
    }
    printf("Blast off!\n");
}
```

E. (5 points) Given the following program, what is the output if the user enters 20000?

```
#include<stdio.h>
#define INTERVAL 20000

int main() {
    int x, answer;

    printf("Enter a number: ");
    scanf( "%d", &x );
    answer = x/INTERVAL;

    switch( answer ) {
    case 0:
        printf("%d is less than %d.\n", x, INTERVAL);
        printf("Tax bracket is 15%%\n");
        break;
    case 1:
        printf("%d is less than %d.\n", x, INTERVAL*2);
    case 2:
        printf("%d is less than %d.\n", x, INTERVAL*3);
        printf("Tax bracket is 28%%\n");
        break;
    default:
        printf("%d is greater than or equal to %d.\n", x, INTERVAL*4);
        printf("Tax bracket is 40%%\n");
    }
    return 0;
}
```

Extra Credit (2 points) What is the command used to compile a program that uses the math library?